

## **Contents of Volume 48 (1991)**

### *Vol. 48 No. 1 January 1991*

T.W. Abou-Arab, T.K. Aldoss and A. Mansour: Pressure drop in alternating curved tubes	1
S. Cuevas and E. Ramos: Heat transfer in an MHD channel flow with boundary conditions of the third kind	11
C.H. Wang, M. Sen and P. Vasseur: Analytical investigation of Bénard-Marangoni convection heat transfer in a shallow cavity filled with two immiscible fluids	35
A. Nakayama and H. Koyama: Buoyancy-induced flow of non-Newtonian fluids over a non-isothermal body of arbitrary shape in a fluid-saturated porous medium	55
I. Pop and H.S. Takhar: Compressibility effects in laminar free convection from a vertical cone	71
H. Yüncü, O.T. Yildirim and S. Kakaç: Two-phase flow instabilities in a horizontal single boiling channel	83
D. Neumann and A. Dinkelacker: Drag measurements on V-grooved surfaces on a body of revolution in axial flow	105

### *Vol. 48 No. 2 April 1991*

#### *Special Issue: Heat Transfer and Fluid Dynamics*

#### *Review of Current Research in the Netherlands*

*Guest Editor: J.F. Dijkman*

Editorial	115
R.J.J. Jongschaap: A generalized thermodynamic approach to microrheological modelling	117
A. Verruijt: Finite element modeling of transport in porous media	129
F.P.T. Baaijens and L.F.A. Douven: Calculation of flow-induced residual stresses in injection-moulded products	141
W.E. ten Napel: Elastohydrodynamics in counterformal and conformal contacts	159
A.E. Mynett, P. Wesseling, A. Segal and C.G.M. Kassels: The ISNaS incompressible Navier-Stokes solver: invariant discretization	175
P.A.A. van Hoogstraten, P.M.A. Slaats and F.P.T. Baaijens: A Eulerian approach to the finite element modelling of neo-Hookean rubber material	193

Foreword	iii
G.W. Colenbrander: CFD in research for the petrochemical industry	211
B.E. Launder: Current capabilities for modelling turbulence in industrial flows	247
D. Roekaerts: Use of a Monte Carlo PDF method in a study of the influence of turbulent fluctuations on selectivity in a jet-stirred reactor	271
S. Elghobashi: Particle-laden turbulent flows: direct simulation and closure models	301
P.U. Foscolo, L.G. Gibilaro and R. Di Felice: Hydrodynamic scaling relationships for fluidisation	315
T.M.M. Verheggen: Stability analysis of fluid-fluid interfaces	329
F.H. Busse: Numerical analysis of secondary and tertiary states of fluid flow and their stability properties	341
T.J. Hanratty: Separated flow modelling and interfacial transport phenomena	353
J.A. Somers and P.C. Rem: Flow computation with lattice gases	391
R. Friedrich, M. Arnal and F. Unger: Large eddy simulation of turbulence in engineering applications	437

## Author index, Volume 48 (1991)

Abou-Arab TW 1	Jongschaap RJJ 117	Sen M 35
Aldoss TK 1	Kakaç S 83	Slaats PMA 193
Arnal M 437	Kassels CGM 175	Somers JA 391
Baaijens FPT 141, 193	Koyama H 55	Takhar HS 71
Busse FH 341	Launder BE 247	ten Napel WE 159
Colenbrander GW 211	Mansour A 1	Unger F 437
Cuevas S 11	Mynett AE 175	van Hoogstraten PAA 193
Di Felice R 315	Nakayama A 55	Vasseur P 35
Dinkelacker A 105	Neumann D 105	Verheggen TMM 329
Douven LFA 141	Pop I 71	Verruijt A 129
Elghobashi S 301	Ramos E 11	Wang CH 35
Foscolo PU 315	Rem PC 391	Wesseling P 175
Friedrich R 437	Roekaerts D 271	Yildirim OT 83
Gibilaro LG 315	Segal A 175	Yüncü H 83
Hanratty TJ 353		

